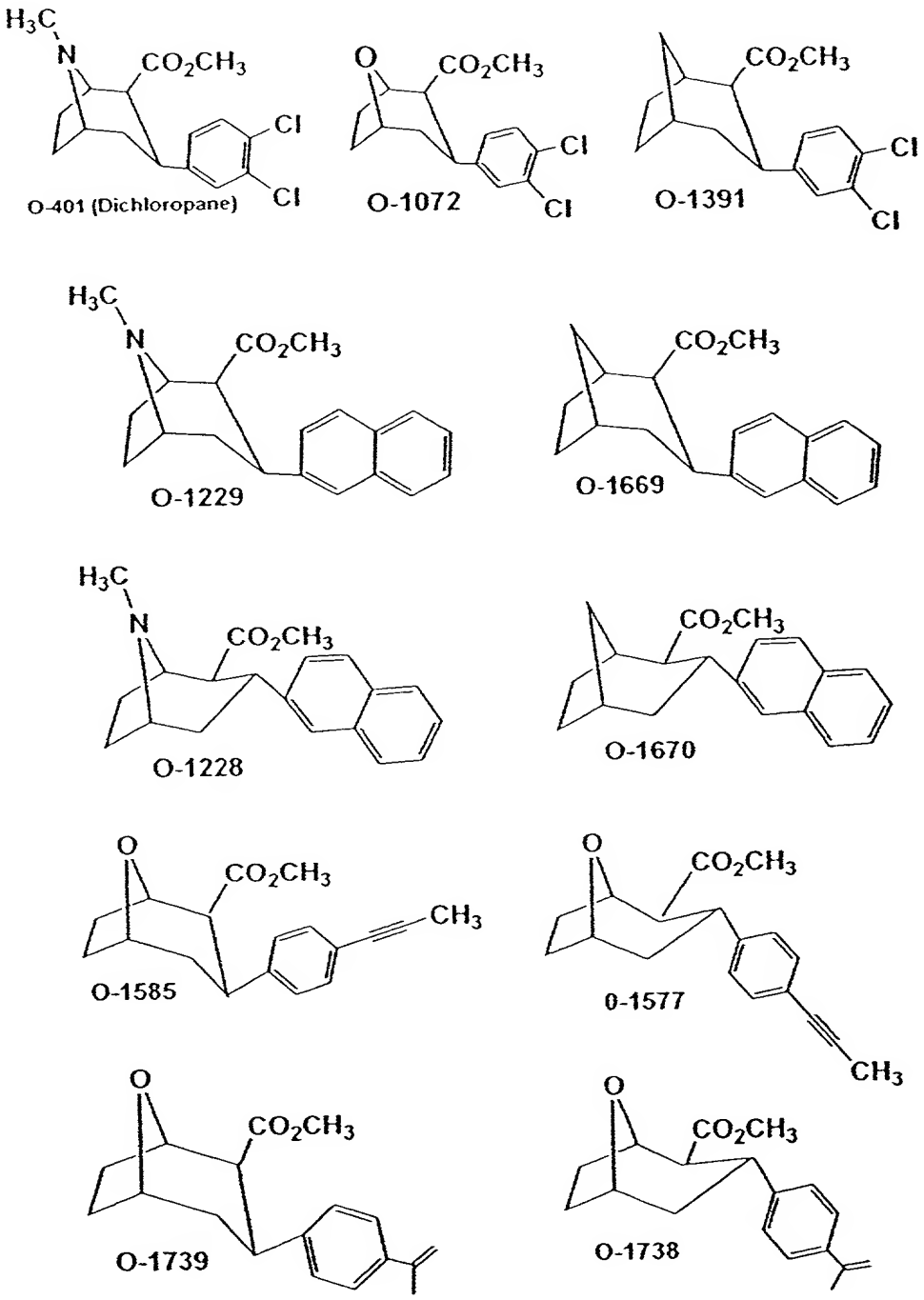
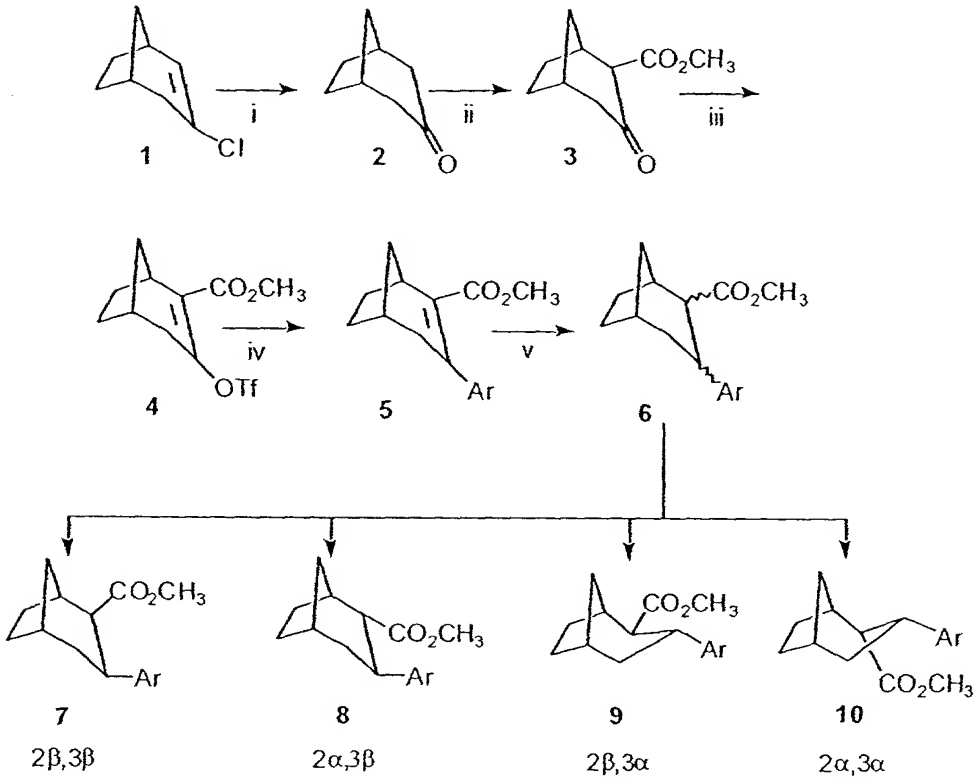

O-401 (Dichloropane)
O-1072
O-1391
O-1229
O-1669
O-1228
O-1670
O-1585
O-1577
O-1739
O-1738

FIG. 1

FIGURE 2

Scheme 1. Synthesis of 2-carbomethoxy-3-arylbicyclo[3 2 1]octanes

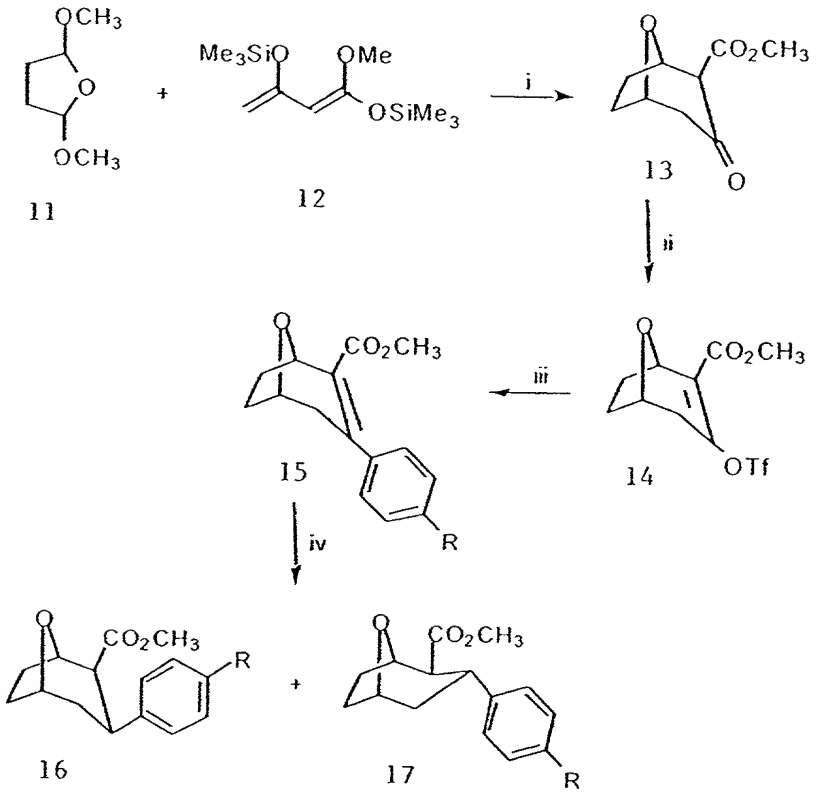


Ar = **a**. 3,4-$Cl_2C_6H_3$ **b**. 2-Naphthyl **c**. 4-FC_6H_4 **d**. C_6H_5

Reagents: i) H_2SO_4; ii) LDA/THF, $CNCOOCH_3$; iii) $NaN(TMS)_2$, $PhNTf_2$; iv) $ArB(OH)_2$, $Pd_2(dba)_3$; v) SmI_2, CH_3OH

FIGURE 3

Scheme 2 Synthesis of 3-aryl-8-oxabicyclo[3 2 1]octanes



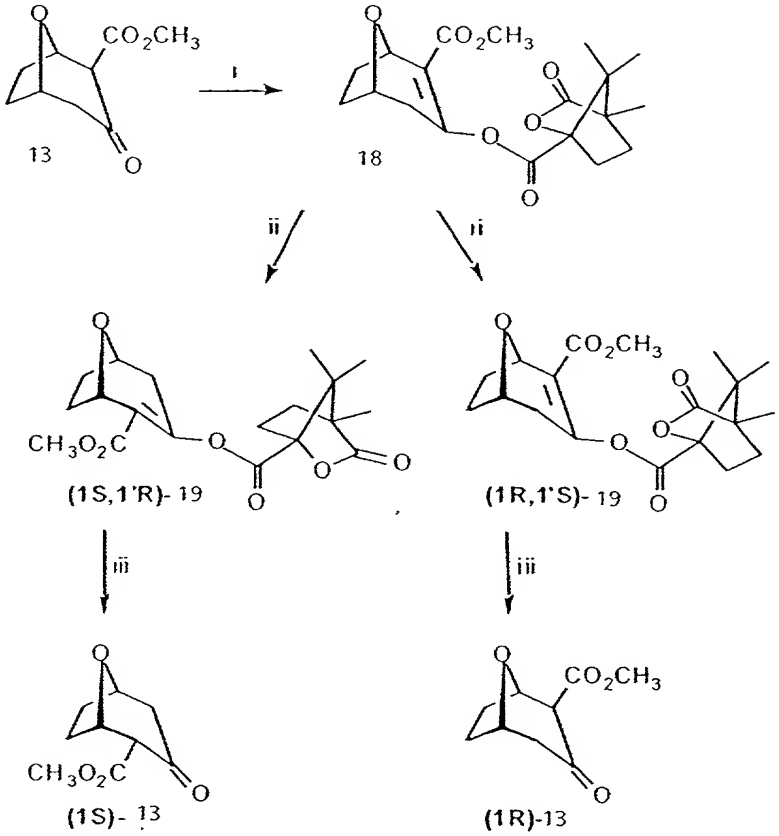
R	a	b	c	d	e	f	g	h
15,16, 17	H R/S	F R/S	Cl R/S	Br R/S	I R/S	3,4-Cl_2 R/S	3,4-Cl_2 1R	3,4-Cl_2 1S

R	i	j	k	l
15,16,17	CHO R/S	$CH(CH_3)_2$ R/S	$C(CH_3)=CH_2$ R/S	$C\equiv CCH_3$ R/S

Reagents : i) $TiCl_4$. ii) $Na(TMS)_2N$, $Ph(Tf)_2N$, THF, -78°C. iii) $ArB(OH)_2$, Pd_2dba_3, Na_2CO_3, LiCl. iv) SmI_2, Methanol, -78°C.

FIGURE 4

Scheme 3 Resolution of keto ester 3



Reagents : i) $Na(TMS)_2N$, (S)-Camphanic chloride or (R)-Camphanic chloride. THF, -78°C. ii) Hexane / CH_2Cl_2 (2 1). 0°C
iii) LiOH, THF, MeOH, H_2O.